



PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: Rainer Perthold et al.

Examiner: Aslan Ettehadieh

Serial No.: 10/018,755

Art Group: 2637

Filing Date: April 30, 2002

Docket No.: 34420.00.0001

Title: **DEVICE AND METHOD FOR PREDISTORTING A TRANSMITTED SIGNAL
TO BE TRANSMITTED VIA A NONLINEAR TRANSMISSION PATH**

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2-28-06
Date

Christine Wright
Christine Wright

INFORMATION DISCLOSURE STATEMENT
IN ACCORDANCE WITH 37 CFR §§ 1.97(C) AND 1.98

Pursuant to 37 CFR §§ 1.97(c) and 1.98, Applicants respectfully submit the following
statement consisting of:

1. A list of documents; and
2. General remarks and Statement Relating to Non-English References.

Copies of the listed documents is enclosed herewith along with Form PTO/SB/08A and
PTO/SB/08B.

1. Documents

A. U.S. Patents

1. U.S. Patent No. 5,113,414 (Karam et al.), issued May 12, 1992;
2. U.S. Patent No. 4,276,514 (Huang), issued June 30, 1981;
3. U.S. Patent No. 6,314,142 B1 (Perthold et al.), issued November 6, 2001.
4. U.S. Patent No. 5,023,937 (Opas), issued June 11, 1991;

5. U.S. Patent No. 4,465,980 (Huang), issued August 14, 1984;
6. U.S. Patent No. 6,674,125 (Carlson et al.), issued June 16, 1987;
7. U.S. Patent No. 3,732,502 (Seidel), issued May 8, 1973.

B. Foreign Patents/Foreign Patent Applications

8. European Patent Application EP0844732 A1 (Space Systems/Loral Inc.) published May 27, 1998;
9. European Patent Application EP 0774833 A1 (NTT Mobile Communications Network Inc.), published May 21, 1997;
10. European Patent Application 0121446 (Gaudin) published Oct. 10, 1984;
11. European Patent Specification EP 0367458B1 (AT&T Corp.), published June 5, 1996;
12. International Patent WO 93/18581 (Motorola Ltd.) published Sept. 16, 1993;
13. UK Patent Application GB 2240893A (Mitsubishi) published Aug. 14, 1991;
14. European Patent Specification 0312261B1 (GEC-MARCONI) published March 23, 1993;
15. European Patent Application 0 658975 A1 (Alcatel), published June 21, 1995;
16. German Patent DE 3423484 C2 (General Electric), Oct. 1, 1985;
17. German Patent DE4326007 A1 (Huber), Sept. 2, 1995;
18. German Patent DE 4319216 A1 (Rohling), Dec. 15, 1994;
19. German Patent 19631388 A1 (Fraunhofer), Jan. 2, 1998; and

C. Other Documents

20. Translated PCT Search Report; International Application No. PCT/EP00/04580; dated October 1, 2001; pages 1-6.

REMARKS

The submission of the above documents is not an admission that the information is prior art, analogous or otherwise material. It is respectfully requested that the above-listed documents be considered and made of record in the present application.

European Patent 0121446 A (Item 10) relates to a system for linearizing an amplifier which causes distortions of a signal to be transmitted. According to this document, the input signal to the amplifier and the output signal therefrom are made use of in order to drive amplitude modulators preceding the amplifier such that non-linearities introduced by the amplifier can be compensated for.

DE 3423484 C2 (Item 17) relates to a system for analyzing in delayed real time the frequency spectrum of an information component of a given temporal signal making use of a pipe-line architecture. US 4,674,125 is an English language equivalent of DE 3423484 C2. This document is concerned with analyzing a temporal signal rather than with predistorting a transmission signal make use of, among other things, a time-dispersive element.

DE 4326007 A1 (Item 18) relates to a method for digitally transmitting a signal via a plurality of channels. The signals received via the plurality of channels are merged making use of dispersive systems in order to reduce disturbances introduced by the individual channels. Different approaches for distortion prediction and for decision feedback equalization or coordinated decision feedback equalization are mentioned in DE 4326007 A1. This document does not include any hint as to the particular predistortion performed according to the independent claims of the present application.

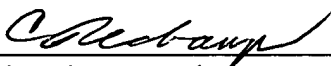
DE 4319216 (Item 19) is concerned with a method for transmission and/or reception of large digital data amounts. This document is not concerned with predistortion techniques but

teaches utilization of the transmitted synchronization signal for restoring the received distorted signal.

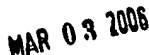
The Patent Office is hereby authorized to charge the fee of \$180.00 set forth in 37 CFR 1.17(p) to Deposit Account No. 22-0259 and is authorized to charge any additional fees required or credit any overpayments to this account. Applicants have enclosed a duplicate copy of this paper.

Respectfully submitted,

Date: 2/28/06

By: 
Christopher J. Reckamp
Registration No. 34,414

Vedder, Price, Kaufman & Kammholz, P.C.
222 N. LaSalle Street
Chicago, IL 60601
(312) 609-7500
FAX: (312) 609-5005



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(Use as many sheets as necessary)

Sheet 1

of 3

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|------------------------|------------------|
| Application Number | 10/018,755 |
| Filing Date | April 30, 2002 |
| First Named Inventor | Rainer Perthold |
| Art Unit | 2637 |
| Examiner Name | Aslan Ettehadieh |
| Attorney Docket Number | 34420.00.0001 |

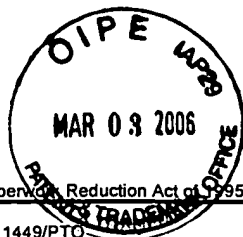
U. S. PATENT DOCUMENTS

| FOREIGN PATENT DOCUMENTS | | | | | | |
|--------------------------|-----------------------|---|--------------------------------|---|---|----------------|
| Examiner Initials* | Cite No. ¹ | Foreign Patent Document | Publication Date MM-DD-YYYY | Name of Patentee or Applicant of Cited Document | Pages, Columns, Lines, Where Relevant Passages Or Relevant Figures Appear | T ⁶ |
| | | Country Code ² Number ⁴ Kind Code ⁵ (if known) | | | | |
| | | EP 0844732 A1 | 05-27-1998 | Space Systems | | |
| | | EP 0774833 A1 | 05-21-1997 | NTT Mobile Comm | | |
| | | EP 0121446 | 10-10-1984 | Gaudin | | |
| | | EP 0367458 B1 | 06-05-1996 | AT&T Corp. | | |
| | | WO 93/18581 | 09-16-1993 | Motorola Ltd. | | |
| | | GB 2240893 A | 08-14-1991 | Mitsubishi | | |

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This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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Complete if Known**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

(Use as many sheets as necessary)

Sheet 3 of 3

| | |
|------------------------|------------------|
| Application Number | 10/018,755 |
| Filing Date | April 30, 2002 |
| First Named Inventor | Rainer Perthold |
| Art Unit | 2637 |
| Examiner Name | Aslan Ettehadieh |
| Attorney Docket Number | 34420.00.0001 |

NON PATENT LITERATURE DOCUMENTS

| Examiner Initials* | Cite No. ¹ | Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published. | T ² |
|-----------------------|--------------------------|---|----------------|
| | | Translated PCT Search Report; International Application No. PCT/EP00/04580; dated October 1, 2001; pages 1-6. | |
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1 Applicant's unique citation designation number (optional). 2 Applicant is to place a check mark here if English language Translation is attached. This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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